**TASK # 01**

Create a new design of calculator using different graphics..

**XML**

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"

xmlns:tools="http://schemas.android.com/tools"

xmlns:app="http://schemas.android.com/apk/res-auto"

android:layout\_width="match\_parent" android:layout\_height="match\_parent"

android:background="@drawable/background" tools:context=".MainActivity"

android:orientation="vertical">

<LinearLayout android:layout\_width="match\_parent"

android:layout\_height="match\_parent" android:background="@drawable/background"

android:clickable="true" android:layout\_margin="30dp" android:orientation="vertical">

<TextView android:id="@+id/result" android:layout\_width="341dp"

android:layout\_height="219dp" android:textColor="@android:color/white"

android:textStyle="bold" android:textAlignment="center"

android:hint="Result" android:textSize="30dp" />

<LinearLayout android:layout\_width="wrap\_content" android:layout\_height="wrap\_content"

android:layout\_margin="10dp"> <Button android:id="@+id/btn7" android:layout\_width="59dp"

android:layout\_height="wrap\_content" android:layout\_marginLeft="10dp"

android:background="@android:color/darker\_gray" android:text="7" android:textSize="20dp" />

<Button android:id="@+id/btn8" android:layout\_width="59dp"

android:layout\_height="wrap\_content" android:layout\_marginLeft="10dp"

android:background="@android:color/darker\_gray" android:text="8" android:textSize="20dp" />

<Button android:id="@+id/btn9" android:layout\_width="59dp"

android:layout\_height="wrap\_content" android:layout\_marginLeft="10dp"

android:background="@android:color/darker\_gray" android:text="9" android:textSize="20dp" />

<Button android:id="@+id/btnDivide" android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content" android:layout\_marginLeft="10dp"

android:background="@drawable/btn\_circle" android:text="/"

android:textColor="@android:color/white" android:textColorHighlight="?attr/colorBackgroundFloating"

android:textSize="30sp" android:textStyle="bold"/> </LinearLayout>

<LinearLayout android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content" android:layout\_margin="10dp">

<Button android:id="@+id/btn6" android:layout\_width="59dp" android:layout\_height="wrap\_content"

android:layout\_marginLeft="10dp" android:background="@android:color/darker\_gray"

android:text="6" android:textSize="20dp" />

<Button android:id="@+id/btn5" android:layout\_width="59dp" android:layout\_height="wrap\_content"

android:layout\_marginLeft="10dp" android:background="@android:color/darker\_gray"

android:text="5" android:textSize="20dp" />

<Button android:id="@+id/btn4" android:layout\_width="59dp" android:layout\_height="wrap\_content"

android:layout\_marginLeft="10dp" android:background="@android:color/darker\_gray"

android:text="4" android:textSize="20dp" />

<Button android:id="@+id/btnmultiply" android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content" android:layout\_marginLeft="10dp"

android:background="@drawable/btn\_circle" android:text="\*"

android:textColor="@android:color/white" android:textColorHighlight="?attr/colorBackgroundFloating"

android:textSize="30sp" android:textStyle="bold"> </Button> </LinearLayout>

<LinearLayout android:layout\_width="wrap\_content" android:layout\_height="wrap\_content"

android:layout\_margin="10dp">

<Button android:id="@+id/btn3" android:layout\_width="59dp" android:layout\_height="wrap\_content"

android:layout\_marginLeft="10dp" sandroid:background="@android:color/darker\_gray"

android:text="3" android:textSize="20dp" />

<Button android:id="@+id/btn2" android:layout\_width="59dp" android:layout\_height="wrap\_content"

android:layout\_marginLeft="10dp" android:background="@android:color/darker\_gray"

android:text="2" android:textSize="20dp" />

<Button android:id="@+id/btn1" android:layout\_width="59dp" android:layout\_height="wrap\_content"

android:layout\_marginLeft="10dp" android:background="@android:color/darker\_gray"

android:text="1" android:textSize="20dp" />

<Button android:id="@+id/btnsubtract" android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content" android:layout\_marginLeft="10dp"

android:background="@drawable/btn\_circle" android:text="-"

android:textColor="@android:color/white" android:textColorHighlight="?attr/colorBackgroundFloating"

android:textSize="30sp" android:textStyle="bold" /> </LinearLayout>

<LinearLayout android:layout\_width="wrap\_content" android:layout\_height="wrap\_content"

android:layout\_margin="10dp">

<Button android:id="@+id/btnClear" android:layout\_width="59dp"

android:layout\_height="wrap\_content" android:layout\_marginLeft="10dp"

android:background="@android:color/darker\_gray" android:text="C"

android:textSize="20dp" />

<Button android:id="@+id/btn0" android:layout\_width="59dp"

android:layout\_height="wrap\_content" android:layout\_marginLeft="10dp"

android:background="@android:color/darker\_gray" android:text="0"

android:textSize="20dp" />

<Button android:id="@+id/btnequals" android:layout\_width="59dp"

android:layout\_height="wrap\_content" android:layout\_marginLeft="10dp"

android:background="@drawable/equal"

android:text="="

android:textColor="@android:color/black"

android:textSize="30sp" />

<Button android:id="@+id/btnsum"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginLeft="10dp"

android:background="@drawable/btn\_circle"

android:text="+"

android:textColor="@android:color/white"

android:textSize="30sp"

android:textStyle="bold" />

</LinearLayout>

</LinearLayout>

</LinearLayout>

**OUTPUT**



**TASK # 02**

Implement the complete functionality of Calculator designed in task one.

**JAVA**

package com.example.myapplication;

import android.support.v7.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

Button b0,b1,b2,b3,b4,b5,b6,b7,b8,b9,badd,bdiv,bsub,bmul,bequal,bclear;

TextView ans; double var1,var2; boolean add,sub,mul,div;

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.*activity\_main*);

bclear=(Button)findViewById(R.id.*btnClear*) ;

b0=(Button)findViewById(R.id.*btn0*);

b1=(Button)findViewById(R.id.*btn1*);

b2=(Button)findViewById(R.id.*btn2*);

b3=(Button)findViewById(R.id.*btn3*);

b4=(Button)findViewById(R.id.*btn4*);

b5=(Button)findViewById(R.id.*btn5*);

b6=(Button)findViewById(R.id.*btn6*);

b7=(Button)findViewById(R.id.*btn7*);

b8=(Button)findViewById(R.id.*btn8*);

b9=(Button)findViewById(R.id.*btn9*);

badd=(Button)findViewById(R.id.*btnsum*);

bsub=(Button)findViewById(R.id.*btnsubtract*);

bmul=(Button)findViewById(R.id.*btnmultiply*);

bdiv=(Button)findViewById(R.id.*btnDivide*);

ans=(TextView)findViewById(R.id.*result*);

bequal=(Button)findViewById(R.id.*btnequals*);

b0.setOnClickListener(new View.OnClickListener() {

public void onClick(View view) { ans.setText(ans.getText()+"0"); } });

b1.setOnClickListener(new View.OnClickListener() {

public void onClick(View view) { ans.setText(ans.getText()+"1"); } });

bclear.setOnClickListener(new View.OnClickListener() {

public void onClick(View view) { ans.setText(null); } });

b1.setOnClickListener(new View.OnClickListener() {

public void onClick(View view) { ans.setText(ans.getText()+"1"); } });

b2.setOnClickListener(new View.OnClickListener() {

public void onClick(View view) { ans.setText(ans.getText()+"2"); } });

b3.setOnClickListener(new View.OnClickListener() {

public void onClick(View view) { ans.setText(ans.getText()+"3"); } });

b4.setOnClickListener(new View.OnClickListener() {

public void onClick(View view) { ans.setText(ans.getText()+"4"); } });

b5.setOnClickListener(new View.OnClickListener() {

public void onClick(View view) { ans.setText(ans.getText()+"5"); } });

b6.setOnClickListener(new View.OnClickListener() {

public void onClick(View view) { ans.setText(ans.getText()+"6"); } });

b7.setOnClickListener(new View.OnClickListener() {

public void onClick(View view) { ans.setText(ans.getText()+"7"); } });

b8.setOnClickListener(new View.OnClickListener() {

public void onClick(View view) { ans.setText(ans.getText()+"8"); } });

b9.setOnClickListener(new View.OnClickListener() {

public void onClick(View view) { ans.setText(ans.getText()+"9"); } });

bequal.setOnClickListener(new View.OnClickListener() {

public void onClick(View view) { ans.setText(ans.getText()+"="); } });

badd.setOnClickListener(new View.OnClickListener() {

public void onClick(View view) { var1=Double.*parseDouble*(ans.getText()+"");

add=true; ans.setText(null); } });

bsub.setOnClickListener(new View.OnClickListener() {

public void onClick(View view) { var1=Double.*parseDouble*(ans.getText()+"");

sub=true; ans.setText(null); } });

bdiv.setOnClickListener(new View.OnClickListener() {

public void onClick(View view) {

var1=Double.*parseDouble*(ans.getText()+""); div=true; ans.setText(null); } } );

bequal.setOnClickListener(new View.OnClickListener() {

public void onClick(View view) {

var2=Double.*parseDouble*(ans.getText()+"");

if(add==true) { ans.setText(var1+var2+""); add=false; }

if(mul==true){

ans.setText(var1+var2+"");

mul=false; }

if(div==true){

ans.setText(var1+var2+"");

div=false; }

if(sub==true){

ans.setText(var1+var2+"");

sub=false;}});}}

**OUTPUT**

Summation of 2 and 3 gives 5

